



FIG. 1

[illegible]

FIG. 2

1	/	1								31	/	11								
ATG	GAC	ATC	GAC	CCT	TAT	AAA	GAA	TTT	GGA	GCT	ACT	GTG	GAG	TTA	CTC	TCG	TTT	TTG	CCT	
met	asp	ile	asp	pro	tyr	lys	glu	phe	gly	ala	thr	val	glu	leu	leu	ser	phe	leu	pro	
61	/	21								91	/	31								
TCT	GAC	TTC	TTT	CCT	TCA	GTA	CGA	GAT	CTT	CTA	GAT	ACC	GCC	TCA	GCT	CTG	TAT	CGG	GAA	
ser	asp	phe	phe	pro	ser	val	arg	asp	leu	leu	asp	thr	ala	ser	ala	leu	tyr	arg	glu	
121	/	41								151	/	51								
GCC	TTA	GAG	TCT	CCT	GAG	CAT	TGT	TCA	CCT	CAC	CAT	ACT	GCA	CTC	AGG	CAA	GCA	ATT	CTT	
ala	leu	glu	ser	pro	glu	his	cys	ser	pro	his	his	thr	ala	leu	arg	gln	ala	ile	leu	
181	/	61								211	/	71								
TGC	TGG	GGG	GAA	CTA	ATG	ACT	CTA	GCT	ACC	TGG	GTG	GGT	GTT	AAT	TTG	GAA	GAT	CCA	GCG	
cys	trp	gly	glu	leu	met	thr	leu	ala	thr	trp	val	gly	val	asn	leu	glu	asp	pro	ala	
241	/	81								271	/	91								
TCT	AGA	GAC	CTA	GTA	GTC	AGT	TAT	GTC	AAC	ACT	AAT	ATG	GGC	CTA	AAG	TTC	AGG	CAA	CTC	
ser	arg	asp	leu	val	val	ser	tyr	val	asn	thr	asn	met	gly	leu	lys	phe	arg	gln	leu	
301	/	101								331	/	111								
TTG	TGG	TTT	CAC	ATT	TCT	TGT	CTC	ACT	TTT	GGA	AGA	GAA	ACA	GTT	ATA	GAG	TAT	TTG	GTG	
leu	trp	phe	his	ile	ser	cys	leu	thr	phe	gly	arg	glu	thr	val	ile	glu	tyr	leu	val	
361	/	121								391	/	131								
TCT	TTC	GGA	GTG	TGG	ATT	CGC	ACT	CCT	CCA	GCT	TAT	AGA	CCA	CCA	AAT	GCC	CCT	ATC	CTA	
ser	phe	gly	val	trp	ile	arg	thr	pro	pro	ala	tyr	arg	pro	pro	asn	ala	pro	ile	leu	
421	/	141								451	/	151								
TCA	ACA	CTT	CCG	GAA	CAT	ACA	GTC	ATT	AGA	AGA	GGA	GGT	GCA	AGA	GCT	TCT	AGG	TCC	CCC	
ser	thr	leu	pro	glu	his	thr	val	ile	arg	arg	gly	gly	ala	arg	ala	ser	arg	ser	pro	
481	/	161								511	/	171								
AGA	AGA	CGC	ACT	CCC	TCT	CCT	CGC	AGG	AGA	AGA	TCC	CAA	AAT	TCG	CAG	TCC	CCA	ACC	TCC	
arg	arg	arg	thr	pro	ser	pro	arg	arg	arg	arg	ser	gln	asn	ser	gln	ser	pro	thr	ser	
541	/	181								571	/	191								
AAT	CAC	TCA	CCA	ACC	TCT	TGT	CCT	CCA	ACT	TGT	CCT	GGT	TAT	CGC	TGG	ATG	TGT	CTG	CGG	
asn	his	ser	pro	thr	ser	cys	pro	pro	thr	cys	pro	gly	tyr	arg	trp	met	cys	leu	arg	
601	/	201								631	/	211								
CGT	TTT	ATC	ATC	TTC	CTC	TTC	ATC	CTG	CTG	CTA	TGC	CTC	ATC	TTC	TTG	TTG	GTT	CTT	CTG	
arg	phe	ile	ile	phe	leu	phe	ile	leu	leu	leu	cys	leu	ile	phe	leu					

FIG. 3

[illegible]

FIG. 4

1	/	1								31	/	11							
ATG	GAC	ATC	GAC	CCT	TAT	AAA	GAA	TTT	GGA	GCT	ACT	GTG	GAG	TTA	CTC	TCG	TTT	TTG	CCT
met	asp	ile	asp	pro	tyr	lys	glu	phe	gly	ala	thr	val	glu	leu	leu	ser	phe	leu	pro
61	/	21								91	/	31							
TCT	GAC	TTC	TTT	CCT	TCA	GTA	CGA	GAT	CTT	CTA	GAT	ACC	GCC	TCA	GCT	CTG	TAT	CGG	GAA
ser	asp	phe	phe	pro	ser	val	arg	asp	leu	leu	asp	thr	ala	ser	ala	leu	tyr	arg	glu
121	/	41								151	/	51							
GCC	TTA	GAG	TCT	CCT	GAG	CAT	TGT	TCA	CCT	CAC	CAT	ACT	GCA	CTC	AGG	CAA	GCA	ATT	CTT
ala	leu	glu	ser	pro	glu	his	cys	ser	pro	his	his	thr	ala	leu	arg	gln	ala	ile	leu
181	/	61								211	/	71							
TGC	TGG	GGG	GAA	CTA	ATG	ACT	CTA	GCT	ACC	TGG	GTG	GGT	GTT	AAT	TTG	GAA	GAT	CCA	GCG
cys	trp	gly	glu	leu	met	thr	leu	ala	thr	trp	val	gly	val	asn	leu	glu	asp	pro	ala
241	/	81								271	/	91							
TCT	AGA	GAC	CTA	GTA	GTC	AGT	TAT	GTC	AAC	ACT	AAT	ATG	GGC	CTA	AAG	TTC	AGG	CAA	CTC
ser	arg	asp	leu	val	val	ser	tyr	val	asn	thr	asn	met	gly	leu	lys	phe	arg	gln	leu
301	/	101								331	/	111							
TTG	TGG	TTT	CAC	ATT	TCT	TGT	CTC	ACT	TTT	GGA	AGA	GAA	ACA	GTT	ATA	GAG	TAT	TTG	GTG
leu	trp	phe	his	ile	ser	cys	leu	thr	phe	gly	arg	glu	thr	val	ile	glu	tyr	leu	val
361	/	121								391	/	131							
TCT	TTC	GGA	GTG	TGG	ATT	CGC	ACT	CCT	CCA	GCT	TAT	AGA	CCA	CCA	AAT	GCC	CCT	ATC	CTA
ser	phe	gly	val	trp	ile	arg	thr	pro	pro	ala	tyr	arg	pro	pro	asn	ala	pro	ile	leu
421	/	141								451	/	151							
TCA	ACA	CTT	CCG	GAG	ACT	ACT	GTT	GTT	AGA	CGA	CGA	GGC	AGG	TCC	CCT	AGA	AGA	AGA	ACT
ser	thr	leu	pro	glu	thr	thr	val	val	arg	arg	arg	gly	arg	ser	pro	arg	arg	arg	thr
481	/	161								511	/	171							
CCC	TCG	CCT	CGC	AGA	CGA	AGG	TCT	CAA	TCG	CCG	CGT	CGC	AGA	AGA	TCG	ATC	CTC	AAC	AAC
pro	ser	pro	arg	arg	arg	arg	ser	gln	ser	pro	arg	arg	arg	arg	ser	ile	leu	asn	asn
541	/	181								571	/	191							
CAG	CAC	GGG	ACC	ATG	CCG	GAC	CTG	CAT	GAC	TAC	TGC	TCA	AGG	AAC	CTC	TAT	GTA	TCC	CTC
gln	his	gly	thr	met	pro	asp	leu	his	asp	tyr	cys	ser	arg	asn	leu	tyr	val	ser	leu
601	/	201								631	/	211							
CTG	TTG	CTG	TAC	CAA	ACC	TTC	GGA	CGG	AAA	TTG	CAC	CTG	TAT	TCC	CAT	CCC	ATC	ATC	CTG
leu	leu	leu	tyr	gln	thr	phe	gly	arg	lys	leu	his	leu	tyr	ser	his	pro	ile	ile	leu
661	/	221								691	/	231							

FIG. 5

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1 / 1 31 / 11
ATG GAT ATC AAT GCT TCT AGA GCC TTA GCC AAT GTG TAT GAT CTA CCA GAT GAT TTC TTT
met asp ile asn ala ser arg ala leu ala asn val tyr asp leu pro asp asp phe phe
61 / 21 91 / 31
CCA AAA ATA GAT GAT CTT GTT AGA GAT GCT AAA GAC GCT TTA GAG CCT TAT TGG AAA TCA
pro lys ile asp asp leu val arg asp ala lys asp ala leu glu pro tyr trp lys ser
121 / 41 151 / 51
GAT TCA ATA AAG AAA CAT GTT TTG ATT GCA ACT CAC TTT GTG GAT CTT ATT GAA GAC TTC
asp ser ile lys lys his val leu ile ala thr his phe val asp leu ile glu asp phe
181 / 61 211 / 71
TGG CAG ACT ACA CAG GGC ATG CAT GAA ATA GCC GAA TCA TTA AGA GCT GTT ATA CCT CCC
trp gln thr thr gln gly met his glu ile ala glu ser leu arg ala val ile pro pro
241 / 81 271 / 91
ACT ACT ACT CCT GTT CCA CCG GGT TAT CTT ATT CAG CAC GAA GAA GCT GAA GAG ATA CCT
thr thr thr pro val pro pro gly tyr leu ile gln his glu glu ala glu glu ile pro
301 / 101 331 / 111
TTG GGA GAT TTA TTT AAA CAC CAA GAA GAA AGG ATA GTG AGT TTC CAA CCC GAC TAT CCG
leu gly asp leu phe lys his gln glu glu arg ile val ser phe gln pro asp tyr pro
361 / 121 391 / 131
ATT ACG GCT AGA ATT CAT GCT CAT TTG AAA GCT TAT GCA AAA ATT AAC GAG GAA TCA CTG
ile thr ala arg ile his ala his leu lys ala tyr ala lys ile asn glu glu ser leu
421 / 141 451 / 151
GAT AGG GCT AGG AGA TTG CTT TGG TGG CAT TAC AAC TGT TTA CTG TGG GGA GAA GCT CAA
asp arg ala arg arg leu leu trp trp his tyr asn cys leu leu trp gly glu ala gln
481 / 161 511 / 171
GTT ACT AAC TAT ATT TCT CGC TTG CGT ACT TGG TTG TCA ACT CCT GAG AAA TAT AGA GGT
val thr asn tyr ile ser arg leu arg thr trp leu ser thr pro glu lys tyr arg gly
541 / 181 571 / 191
AGA GAT GCC CCG ACC ATT GAA GCA ATC ACT AGA CCA ATC CAG GTG GCT CAG GGA GGC CGA
arg asp ala pro thr ile glu ala ile thr arg pro ile gln val ala gln gly gly arg
601 / 201 631 / 211
AAA ACA ACT ACG GGT ACT AGA AAA CCT CGT GGA CTC GAA CCT AGA AGA AGA AAA GTT AAA
lys thr thr thr gly thr arg lys pro arg gly leu glu pro arg arg arg lys val lys
661 / 221 691 / 231
ACC ACA GTT GTC TAT GGG AGA AGA CGT TCA AAG TCC CGG GGA AGG AGA GCC CCT ACA CCC
thr thr val val tyr gly arg arg arg ser lys ser arg gly arg arg ala pro thr pro
721 / 241 751 / 251
CAA CGT GCG GGC TCC CCT CTC CCA CGT AGT TCG AGC AGC CAC CAT AGA TCC TTC GGG GGA
gln arg ala gly ser pro leu pro arg ser ser ser his his arg ser phe gly gly
781 / 261 811 / 271
ATA CTA GCT GGC CTA ATC GGA TTA CTG GTA AGC TTT TTC TTG TTG ATA AAA ATT CTA GAA
ile leu ala gly leu ile gly leu leu val ser phe phe leu leu ile lys ile leu glu
841 / 281 871 / 291
ATA CTG AGG AGG CTA GAT TGG TGG TGG ATT TCT CTC AGT TCT CCA AAG GGA AAA ATG CAA
ile leu arg arg leu asp trp trp trp ile ser leu ser ser pro lys gly lys met gln
901 / 301 931 / 311
TGC GCT TTC CAA GAT ACT GGA GCC CAA ATC TCT CCA CAT TAC GTC GGA TCT TGC CCG TGG
cys ala phe gln asp thr gly ala gln ile ser pro his tyr val gly ser cys pro trp
961 / 321 991 / 331
GGA TGC CCA GGA TTT CTT TGG ACC TAT CTC AGG CTT TTT ATC ATC TTC CTC TTA ATC CTG
gly cys pro gly phe leu trp thr tyr leu arg leu phe ile ile phe leu leu ile leu
1021 / 341 1051 / 351
CTA GTA GCA GCA GGC TTG CTG TAT CTG ACG GAC AAC GGG TCT ACT ATT TTA GGA AAG CTC
leu val ala ala gly leu leu tyr leu thr asp asn gly ser thr ile leu gly lys leu
1081 / 361 1111 / 371
CAA TGG GCG TCG GTC TCA GCC CTT TTC TCC TCC ATC TCT TCA CTA CTG CCC TCG GAT CCG
gln trp ala ser val ser ala leu phe ser ser ile ser ser leu leu pro ser asp pro
1141 / 381 1171 / 391
AAA TCT CTC GTC GCT TTA ACG TTT GGA CTT TCA CTT ATA TGG ATG ACT TCC TCC TCT GCC
lys ser leu val ala leu thr phe gly leu ser leu ile trp met thr ser ser ser ala
1201 / 401 1231 / 411
ACC CAA ACG CTC GTC ACC TTA ACG CAA TTA GCC ACG CTG TCT GCT CTT TTT TAC AAG AGC
thr gln thr leu val thr leu thr gln leu ala thr leu ser ala leu phe tyr lys ser
1261 / 421
TAG

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FIG. 6

ATG	GAC	ATC	GAC	CCT	TAT	AAA	GAA	TTT	GGA	GCT	ACT	GTC	GAG	TTA	CTC	48
Met	Asp	Ile	Asp	Pro	Tyr	Lys	Glu	Phe	Gly	Ala	Thr	Val	Glu	Leu	Leu	
1				5					10					15		
TCG	TTT	TTG	CCT	TCT	GAC	TTC	TTT	CCT	TCA	GTA	CGA	GAT	CTT	CTA	GAT	96
Ser	Phe	Leu	Pro	Ser	Asp	Phe	Phe	Pro	Ser	Val	Arg	Asp	Leu	Leu	Asp	
			20					25					30			
ACC	GCC	TCA	GCT	CTG	TAT	CGG	GAA	GCC	TTA	GAG	TCT	CCT	GAG	CAT	TGT	144
Thr	Ala	Ser	Ala	Leu	Tyr	Arg	Glu	Ala	Leu	Glu	Ser	Pro	Glu	His	Cys	
		35					40					45				
TCA	CCT	CAC	CAT	ACT	GCA	CTC	AGG	CAA	GCA	ATT	CTT	TGC	TGG	GGG	GAA	192
Ser	Pro	His	His	Thr	Ala	Leu	Arg	Gln	Ala	Ile	Leu	Cys	Trp	Gly	Glu	
	50					55					60					
CTA	ATG	ACT	CTA	GCT	ACC	TGG	GTG	GGT	GTT	AAT	TTG	GAA	GAT	CCA	GCG	240
Leu	Met	Thr	Leu	Ala	Thr	Trp	Val	Gly	Val	Asn	Leu	Glu	Asp	Pro	Ala	
65					70					75					80	
TCT	AGA	GAC	CTA	GTA	GTC	AGT	TAT	GTC	AAC	ACT	AAT	ATG	GGC	CTA	AAG	288
Ser	Arg	Asp	Leu	Val	Val	Ser	Tyr	Val	Asn	Thr	Asn	Met	Gly	Leu	Lys	
				85					90					95		
TTC	AGG	CAA	CTC	TTG	TGG	TTT	CAC	ATT	TCT	TGT	CTC	ACT	TTT	GGA	ACA	336
Phe	Arg	Gln	Leu	Leu	Trp	Phe	His	Ile	Ser	Cys	Leu	Thr	Phe	Gly	Thr	
			100					105					110			
GAA	ACA	GTT	ATA	GAG	TAT	TTG	GTG	TCT	TTC	GGA	GTG	TGG	ATT	CGC	ACT	384
Glu	Thr	Val	Ile	Glu	Tyr	Leu	Val	Ser	Phe	Gly	Val	Trp	Ile	Arg	Thr	
		115					120					125				
CCT	CCA	GCT	TAT	AGA	CCA	CCA	AAT	GCC	CCT	ATC	CTA	TCA	ACA	CTT	CCG	432
Pro	Pro	Ala	Tyr	Arg	Pro	Pro	Asn	Ala	Pro	Ile	Leu	Ser	Thr	Leu	Pro	
		130				135					140					
GAG	ACT	ACT	GTT	GTT	AGA	CGA	CCA	GGC	AGG	TCC	CCT	AGA	AGA	AGA	ACT	480
Glu	Thr	Thr	Val	Val	Arg	Arg	Pro	Gly	Arg	Ser	Pro	Arg	Arg	Arg	Thr	
145					150					155					160	
CCC	TCG	CCT	CGC	AGA	CGA	AGG	TCT	CAA	TCG	CCC	CGT	CGC	AGA	AGA	TCT	528
Pro	Ser	Pro	Arg	Arg	Arg	Arg	Ser	Gln	Ser	Pro	Arg	Arg	Arg	Arg	Ser	
				165					170						175	
CAA	TCT	CGG	GAA	TCT	CAA	TGT	TAG									552
Gln	Ser	Arg	Glu	Ser	Gln	Cys										
			180													

FIG. 7

ATG Met 1	GAG Glu	AAC Asn	ATC Ile	ACA Thr 5	TCA Ser	GGA Gly	TTC Phe	CTA Leu	GGA Gly 10	CCC Pro	CTT Leu	CTC Leu	GTG Val	TTA Leu 15	CAG Gln	48
GCG Ala	GGG Gly	TTT Phe 20	TTC Phe	TTG Leu	TTG Leu	ACA Thr	AGA Arg	ATC Ile 25	CTC Leu	ACA Thr	ATA Ile	CCC Pro	CAG Gln 30	AGT Ser	CTA Leu	96
GAC Asp	TCG Ser	TGG Trp 35	TGG Trp	ACT Thr	TCT Ser	CTC Leu	AAT Asn 40	TTT Phe	CTA Leu	GGG Gly	GGA Gly 45	ACT Thr	ACC Thr	GTG Val	TGT Cys	144
CTT Leu 50	GGC Gly	CAA Gln	AAT Asn	TCG Ser	CAG Gln	TCC Ser 55	CCA Pro	ACC Thr	TCC Ser	AAT Asn	CAC His 60	TCA Ser	CCA Pro	ACC Thr	TCT Ser	192
TGT Cys 65	CCT Pro	CCA Pro	ACT Thr	TGT Cys	CCT Pro 70	GGT Gly	TAT Tyr	CGC Arg	TGG Trp	ATG Met 75	TGT Cys	CTG Leu	CGG Arg	CGT Arg	TTT Phe 80	240
ATC Ile	ATC Ile	TTC Phe	CTC Leu	TTC Phe 85	ATC Ile	CTG Leu	CTG Leu	CTA Leu	TGC Cys 90	CTC Leu	ATC Ile	TTC Phe	TTG Leu 95	TTG Leu	GTT Val	288
CTT Leu	CTG Leu	GAC Asp 100	TAT Tyr	CAA Gln	GGT Gly	ATG Met	TTG Leu	CCC Pro 105	GTT Val	TGT Cys	CCT Pro	CTA Leu	ATT Ile 110	CCA Pro	GGA Gly	336
TCC Ser	TCA Ser	ACA Thr 115	ACC Thr	AGC Ser	ACG Thr	GGA Gly	CCA Pro 120	TGC Cys	CGG Arg	ACC Thr	TGC Cys	ATG Met 125	ACT Thr	ACT Thr	GCT Ala	384
CAA Gln 130	GGA Gly	ACC Thr	TCT Ser	ATG Met	TAT Tyr	CCC Pro 135	TCC Ser	TGT Cys	TGC Cys	TGT Cys	ACC Thr 140	AAA Lys	CCT Pro	TCG Ser	GAC Asp	432
GGA Gly 145	AAT Asn	TGC Cys	ACC Thr	TGT Cys	ATT Ile 150	CCC Pro	ATC Ile	CCA Pro	TCA Ser	TCC Ser 155	TGG Trp	GCT Ala	TTC Phe	GGA Gly 160	AAP Lys	480
TTC Phe	CTA Leu	TGG Trp	GAG Glu	TGG Trp 165	GCC Ala	TCA Ser	GCC Ala	CCT Pro	TTC Phe 170	TCC Ser	TGG Trp	CTC Leu	AGT Ser	TTA Leu 175	CTA Leu	528
GTC Val	CCA Pro	TTT Phe 180	GTT Val	CAG Gln	TGG Trp	TTC Phe	GTA Val	GGG Gly 185	CTT Leu	TCC Ser	CCC Pro	ACT Thr	GTT Val 190	TGG Trp	CTT Leu	576
TCA Ser	GTT Val	ATA Ile 195	TGG Trp	ATG Met	ATG Met	TGG Trp	TAT Tyr 200	TGG Trp	GGG Gly	CCA Pro	AGT Ser	CTG Leu 205	TAC Tyr	AGC Ser	ATC Ile	624
TTG Leu 210	AGT Ser	CCC Pro	TTT Phe	TTA Leu	CCG Pro	CTG Leu 215	TTA Leu	CCA Pro	ATT Ile	TTC Phe	TTT Phe 220	TGT Cys	CTT Leu	TGG Trp	GTA Val	672
TAC Tyr 225	ATT Ile	TAA														681

FIG. 8